TOSHIBA Transistor Silicon PNP Epitaxial Type

2SA2183

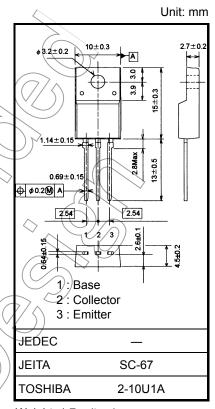
High Current Switching Applications

• Low collector-emitter saturation : $V_{CE(sat)} = -1.0 \text{ V} \text{ (max)}$

Absolute Maximum Ratings (Ta = 25°C)

Characteristics		Symbol	Rating	Unit	
Collector-base voltage		V_{CBO}	-60	V	
Collector-emitter voltage		V _{CEO}	-60	W (
Emitter-base voltage		V _{EBO}	-7	V	
Collector current	DC	IC	-5.0	(/A)	
	Pulse	I _{CP}	-8.0	A	
Base current		ΙΒ	-0,5	A	
Collector power dissipation	Ta = 25°C	Pc	2	> w	
	Tc = 25°C	FC	20	W	
Junction temperature		Tj	150	°C	
Storage temperature range		T _{stg}	-55 to 150	/%C	

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.



Weight: 1.7 g (typ.)

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

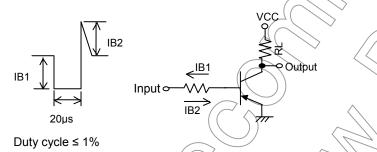




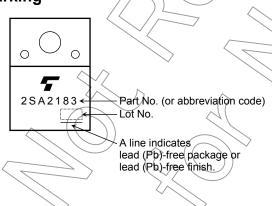
Electrical Characteristics (Ta = 25°C)

Charac	cteristics Symbol Test Condition		Min	Тур.	Max	Unit	
Collector cut-off cu	rrent	I _{CBO}	V _{CB} = -60 V, I _E = 0	_	_	-100	nA
Emitter cut-off curr	ent	I _{EBO}	V _{EB} = -7 V, I _C = 0	_	_	-100	nA
Collector-emitter b	reakdown voltage	V (BR) CEO	I _C = -10 mA, I _B = 0	-60	_	_	V
DC current gain —		h _{FE (1)}	V _{CE} = -2 V, I _C = -0.5 A	200	_	500	
		h _{FE} (2)	V _{CE} = -2 V, I _C = -1.6 A	100) / _	_	
Collector emitter sa	aturation voltage	V _{CE} (sat)	I _C = -1.6 A, I _B = -53 mA	> <u>~</u>	_	-1.0	V
Base-emitter satur	ation voltage	V _{BE} (sat)	I _C = -1.6 A, I _B = -53 mA	$\bigcirc))$	_	-1.5	V
Transition frequence	су	f _T	V _{CE} = -10 V, I _C = -0.5 A	_	170	_	MH_Z
Collector output ca	pacitance	C _{ob}	V _{CB} = -10 V, I _E = 0, f = 1 MHz	_	38	_	pF
Switching time	Rise time	t _r	See Figure 1 circuit diagram	_	100	//	
	Storage time	t _{stg}	VCC≒-30V,RL=18.75Ω	- (300	<u> </u>	ns
	Fall time	t _f	$I_{B1} = -53 \text{ mA}, I_{B2} = 53 \text{ mA},$	+(60	> _	

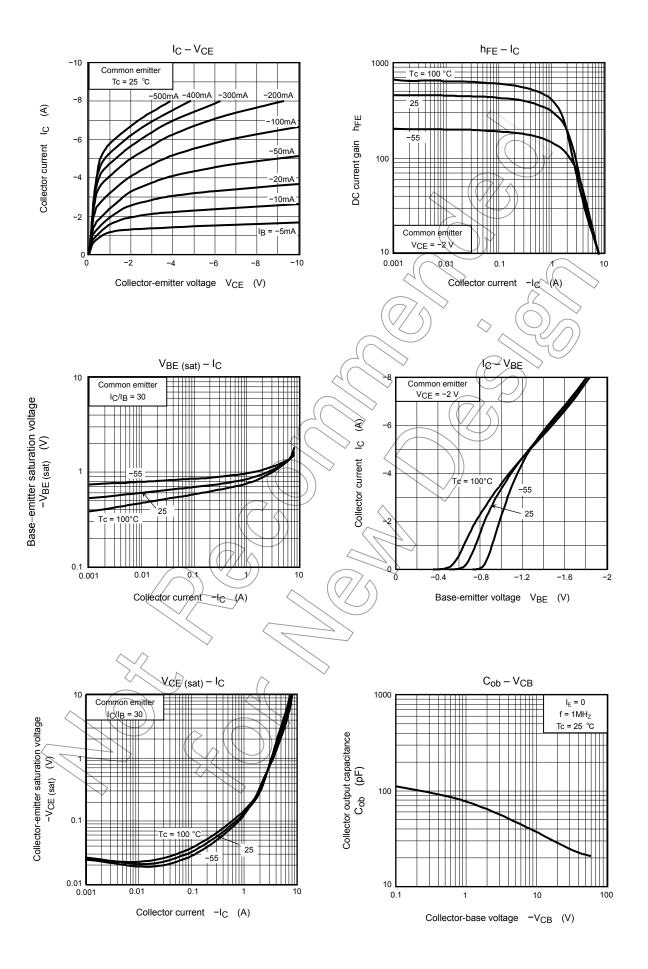


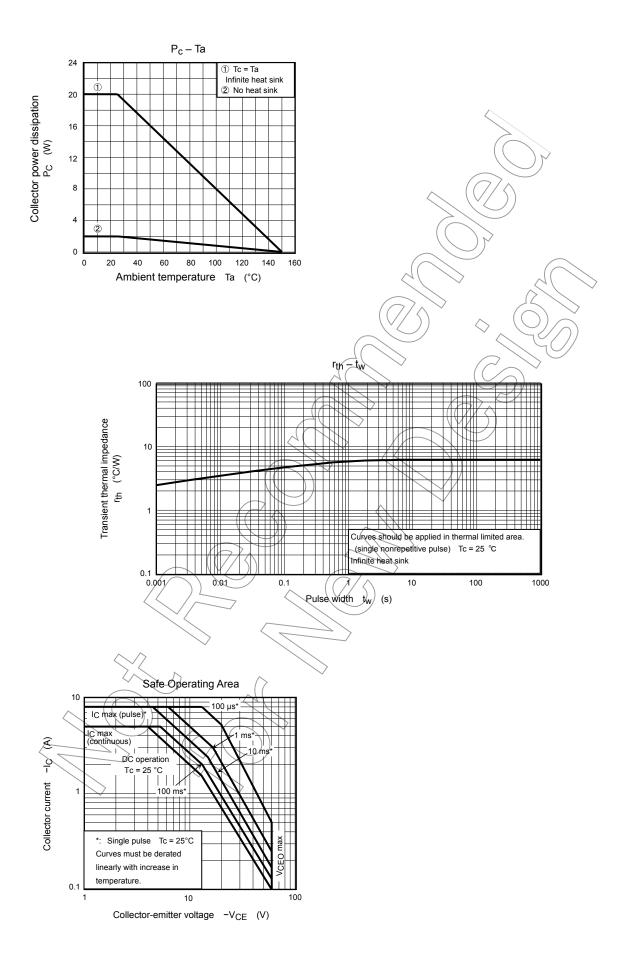


Marking



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